

Reference Guide

A guide to the legislation
and regulations for confined
feeding operations (CFOs)
and seasonal feeding and
bedding sites in Alberta.



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<http://www.agric.gov.ab.ca/navigation/livestock/cfo/index.html>

DISCLAIMER: This guide summarizes important aspects of the Agricultural Operation Practices Act and the Natural Resources Conservation Board process. The document is not intended as legal advice, but as an interpretive document to the Agricultural Operation Practices Act and Regulations. The responsibility is on the producer/operator to ensure due diligence has been followed. The Agricultural Operation Practices Act and Natural Resources Conservation Board Act, and Regulations under these Acts should be referred to for legal definitions and for the specific requirements at each stage of the process.

This document has been reviewed by the Office of the Farmers' Advocate of Alberta, the Natural Resources Conservation Board and Alberta Agriculture, Food and Rural Development.

OVERVIEW: THE AGRICULTURAL OPERATION PRACTICES ACT

New rules, new attitude for Alberta's livestock industry.

Amendments to the Agricultural Operation Practices Act (AOPA), also referred to as the Act for the purposes of this document, were passed in the 2001 fall session of the Legislative Assembly of Alberta, launching a new standard for environmental management in Alberta's livestock industry.

The amendments enhance the province's ability to deal with nuisance, such as odour, noise, dust, smoke or other disturbances resulting from an agricultural operation. They also provide producers and other stakeholders with a one-window process for the siting of new and expanding confined feeding operations (CFOs). The Act also lays out a set of clear standards for manure storage and application for all farming and ranching operations.

This Reference Guide was developed to assist producers in understanding the new regulations and their obligations as defined in the Act. It is part of an extensive communications effort to keep producers and the public informed about the CFO approval process and environmental standards. Development of the Guide was led by Alberta Agriculture, Food and Rural Development, in co-operation with the Natural Resources Conservation Board.

KEY POINTS IN THE LEGISLATION

This section provides an overview of major points in the legislation.

Nuisance provision. Complaints about livestock operations are first reviewed by the Natural Resources Conservation Board to determine if the operation is in compliance with the regulations and standards. The Farmers' Advocate of Alberta deals with nuisance cases, such as odour, noise, dust, smoke or other disturbance resulting from an agricultural operation (Act, Section 3).

One-window approach. The Natural Resources Conservation Board (NRCB), also referred to as the Board for the purposes of this document, administers a one-window process for siting and approval of applications for new and expanding confined feeding operations, and for the compliance monitoring and enforcement of province-wide standards. The NRCB is designed to provide a consistent, transparent process for the industry and the public.

Confined Feeding Operations. Confined feeding operations (CFOs) are fenced or enclosed areas where livestock are confined for the purposes of growing, sustaining, finishing or breeding by means other than grazing (Act, Section 1). Backgrounding operations are also considered to be CFOs. Any operation, which brings feed in and removes manure is considered a CFO.

Approval, registration and authorization required.

The regulatory requirements for CFOs are determined based on the type and number of animals (Matters Regulation, Schedule 2).

CFOs

- An application for an approval, registration or authorization, or for an amendment of an approval, registration or authorization, must be made to an NRCB Approval Officer. An Approval Officer will determine whether an application is complete. If an application is not completed in accordance with the regulations, the Approval Officer may deny the application (Act, Section 18). Once an application is deemed complete, an Approval Officer is responsible for making decisions on the application and providing reasons for the decision.
- Large CFOs will require an approval, while medium-sized operations will require a registration. New and expanding operations below the registration threshold do not require a registration or approval. All operations must meet the regulations for manure storage and application.
- Without prior approval or registration, construction or expansion cannot begin. Operators who hold an approval or registration must comply with the terms and conditions set out in the approval or registration (Act, Section 13).

Manure Storages

- Operators are required to obtain an authorization for construction or expansion of a manure storage facility that is intended for containment of manure for six months or more in any calendar year (Matters Regulation, Section 4).

- An authorization is required for construction, expansion or modification of a facility for storing manure that is in a predominantly liquid state, or manure to which water has been added (Act, Section 14).

There can be no construction, expansion or modification of a manure storage facility for which an authorization is required unless:

- The person holds an authorization that authorizes the construction, expansion or modification.
- The person holds an approval or registration that authorizes the construction, expansion or modification.
- A person who holds an authorization must comply with and operate in accordance with the terms and conditions of the authorization.

Minimum Distance Separation. The Act sets out the Minimum Distance Separation (MDS), which provides an area of separation between CFOs and neighbouring residences to reduce nuisance (Standards and Administration Regulation, Section 3). The MDS is established at the time the application is made.

Notification. The Act includes provisions for the Approval Officer to obtain input from other parties in order to make decisions on approvals, registrations and authorizations.

- For registrations and authorizations, only the applicant and the municipality are considered to be affected parties.
- Registrations and authorizations only require notification of municipalities. Municipalities are considered to be a 'directly affected party' for all applications (Act, Section 21).
- For approvals, the notification distance is specified in the regulations, and the distance increases according to the size of the proposed operation.

Completed approval applications will be available for public viewing at the NRCB office for 15 working days after the date the application was determined to be complete. This is to ensure that all persons who could be directly affected by the application have the opportunity to comment on the application, and to establish their standing with the Board (Act, Section 19).

An affected party or municipality notified may, within 10 working days of reviewing the application, apply to an Approval Officer to be recognized as a directly affected party and to submit statements of concern about a proposed development. Any member of the public who has viewed the application, may make a similar written application and submit their concerns within 20 working days after the date the application was determined to be complete. The Board's regional Approval Officers will determine if individuals are able to demonstrate that they are directly affected by the project, will notify them of that determination, and will consider their concerns in making decisions about proposed developments if the Approval Officer determines that they are directly affected.

Considerations in approval decisions. An Approval Officer must deny an application for an approval or an amendment of an approval, if the application does not meet the requirements of the legislation, or is inconsistent with the municipal development plan. Applications that meet this criteria will also be assessed in terms of their potential impacts on: the environment; the economy; the community; and the appropriate use of land. An Approval Officer may grant an approval, and impose terms and conditions that a municipality would impose if it were issuing a development permit. Copies of the decision will be sent to all persons who applied to be recognized as a directly affected party and who submitted a statement of concern. These parties can seek a Board review of the Approval Officer's decision by providing a written request within 10 working days of receiving that decision (Act, Section 20).

Considerations in registration and authorization decisions. An Approval Officer must deny an application for a registration or authorization, or an amendment of a registration or an authorization, if the application does not meet the requirements of the legislation, or is inconsistent with the municipal development plan. An Approval Officer may grant a registration or authorization, and impose terms and conditions that a municipality could impose if it were issuing a development permit (Act, Section 22). Only the applicant or a municipal authority can request a Board review of the Approval Officer's decision on registrations or authorizations.

Reviews. The Board must, within 10 working days of receiving an application for review, either dismiss the application, or schedule a review. The Board can deny the application for review if, in its opinion, the issues raised in the application for review were adequately dealt with by the Approval Officer, or the issues raised are of little merit (Act, Section 25).

Appeals. A Board decision can only be appealed to the Court of Appeal on a question of jurisdiction or law. The Act specifies the details of the appeal process and timelines that must be observed (Act, Section 27).

Seasonal feeding and bedding. Seasonal feeding and bedding sites will not be subject to the CFO approval process, but must be sited or designed to protect surface water from manure contamination (Standards and Administration Regulation, Section 4). An operator required to store or spread manure from a seasonal feeding and bedding site must follow the regulations for manure application and storage. Operators must ensure that manure or runoff:

- Has not entered a common body of water and/or,
- Has not created a risk to the environment, and/or,
- Has not left the land on which it was applied or otherwise created an inappropriate disturbance.

Producers will have until the end of 2004 to meet these new requirements.

Manure management. Agricultural operations must manage manure in accordance with the nutrient management requirements in the Standards and Administration Regulation (Sections 23 and 25). Operations will have until the end of 2004 to comply with the new manure management standards.

Manure storage. The new legislation includes standards for solid and liquid manure storage. These requirements apply to all producers, not just CFOs. The regulations specify how storage facilities are to be constructed, sited and operated.

Manure application. A person who applies manure must do so in accordance with the regulations. However, a person may seek a variance from the NRCB, that authorizes a higher application rate than is specified in the legislation. The variance must achieve equivalent levels of environmental protection.

Record keeping. The legislation sets out specific requirements for record keeping. The goal is to optimize the use of manure as a soil conditioner and fertilizer. Any operator who applies or transfers over 300 tonnes of manure per year, and the person who receives over 300 tonnes of manure must keep records (Standards and Administration Regulation, Section 28).

Existing operations (Transitional Provisions).

- In the case of all CFOs and manure storage facilities which existed prior to January 1, 2002 and for which a development permit **WAS** issued by the municipality or health authority, the Act and the regulations apply to the CFO, manure storage facility and the collection, transportation, storage, application, use, transfer or disposal of manure. The terms and conditions of the development permit, even if they conflict with the standards in the regulations, continue to apply and prevail until:
 - in the opinion of the Board there is a risk to the environment or an inappropriate disturbance, or;
 - an approval, registration or authorization is granted under the Act to expand or modify the CFO or manure storage facility.
- In the case of all CFOs and manure storage facilities which existed prior to January 1, 2002 and for which a municipal development permit or Public Health Act authorization, **WAS NOT** issued, the Act and the regulations apply to the confined feeding operation for the use, handling and storage of manure. The Act and the regulations do not apply to an existing building or structure until:
 - the building or structure is expanded, or;
 - there is a risk to the environment or an inappropriate disturbance.

Existing operations do not have to change or modify a building or structure to meet the new standards unless specifically required to do so by the Board. The Board can investigate any risk to the environment or an inappropriate disturbance and enforce terms and conditions in existing development permits or enforce compliance issues relating to any existing operation. When the existing operation expands, only the new or expanded building or manure storage facility must meet the new standards in the regulations.

Change of ownership. When ownership of a CFO changes, the new owner must notify the Board (Act, Section 28).

Powers of inspectors. The legislation allows for an inspector to enter and inspect any building or land, other than a private dwelling-place, reasonably believed to be used in connection with an agricultural operation. This inspection may include: sampling of anything connected with an agricultural operation; requesting that equipment used to manage manure be operated, used or set in motion; recording or copying of any information by any method; taking of audio-visual records; and making reasonable inquiries of any person, orally or in writing (Act, Section 30).

Enforcement orders. The NRCB may issue an enforcement order if a person:

- Is creating a risk to the environment or an inappropriate disturbance.
- Has contravened the terms and conditions contained in an existing municipal development permit.
- Is contravening or has contravened an approval, registration, authorization, variance, terms or conditions of a cancellation, the legislation or the regulations (Act, Section 39).

Inspectors can obtain a court order if there is:

- Failure to comply with the NRCB enforcement order (Act, Section 42).
- Resisting, obstructing or delaying of an inspector (Act, Section 31).

Offences/court fines. The following fines may apply:

- A person who contravenes the regulations or certain sections of the Act may be liable for a fine of not more than \$5,000.
- A person who **knowingly** contravenes the regulations or certain sections of the Act may be liable for a fine of not more than \$10,000 (Act, Sections 35 and 36).

The court can recover any profit made arising from the offence.

ROLES AND RESPONSIBILITIES

The Agricultural Operation Practices Act (AOPA) establishes new regulations, responsibilities and a new approach for approving and monitoring livestock operations in the province.

Natural Resources Conservation Board

The Natural Resources Conservation Board (NRCB) is an independent, quasi-judicial agency reporting to the Minister of Sustainable Resource Development. Its responsibilities include the review and approval of applications for new and expanding CFOs, as well as compliance monitoring and enforcement of province-wide standards.

DETERMINING PUBLIC INTEREST

The NRCB uses three principles to determine which proposed projects best protect and promote the public interest.

Economic sustainability. Since a strong, stable economy is in the interest of Albertans, so too is an economically successful agriculture industry.

Environmental sustainability. Protecting the public interest requires that all industries, including agriculture, function in an environmentally sustainable manner. Development must proceed in a way that ensures air, soil, water and Alberta's rich biological heritage are protected now and in the future.

Social sustainability. The basic rights of individuals must be respected when society makes decisions in the broader public interest.

KEY FUNCTIONS

These are the NRCB's main functions:

Application review and processing. Producers wishing to build a new CFO or to expand an existing facility must submit an application to the Approval Officer. Four regional offices have been set up to receive and coordinate the review of applications.

Affected parties will be given an opportunity to review and understand the application and provide comments to the regional Approval Officer. Local planning requirements will be strongly considered in approvals, and municipal input will be encouraged.

Once the application is completed and accepted by the Approval Officer, the Approval Officer completes the technical assessments, reviews input received and issues a decision on the application.

Public review of decisions. The applicant or a directly affected party has the right to request that the Board conduct a review of a decision made by the Approval Officer. If a review is granted, a hearing into the application may then be scheduled. The review may take place in the local community.

The Board is also prepared to facilitate discussions between producers and affected parties to explore and possibly mediate concerns. Solid timeframes have been set out for all stages of the process (Act, Section 25).

Compliance monitoring and enforcement. The Board is responsible for ensuring that agricultural operations, including CFOs and manure management facilities, are built and operated in accordance with the approvals and the province-wide standards. The Board responds to complaints regarding existing operations and ensures that these facilities also meet the appropriate regulatory requirements. Inspections and an effective compliance and enforcement philosophy are key to this process.

Enforcement is based on three fundamentals. First, the inspection process will be driven by complaints. A toll-free response line has been implemented: 1-866-383-6722.

Second, the NRCB will focus on education and voluntary compliance. Third, enforcement action may be taken when these measures are not successful. Actions will be appropriate to the severity of the situation, with escalating consequences for repeat non-compliance or failure to respond.



Farmers' Advocate of Alberta

The Farmers' Advocate has more authority and new tools to handle nuisance situations involving all agricultural operations, including livestock operations that are in compliance with regulations under the Agricultural Operation Practices Act (AOPA).

The process is intended to be simple. Under the amended Act, complaints about livestock operations are first reviewed by the Natural Resources Conservation Board to determine if the operation is in compliance with the regulations and standards. If it is complying, then the complaint may be forwarded to the Farmers' Advocate.

Once the Farmers' Advocate office has received a complaint, the office will investigate the complaint. Once the investigation is complete, the Farmers' Advocate has several options based on the investigation. If the complaint is vexatious or frivolous, it can recommend to the Minister that the complaint be dismissed.

If the nuisance complaint has some validity, the Farmers' Advocate will attempt to informally mediate between the disputing parties. If the dispute is not resolvable at that point, an Agricultural Practices Review Committee may be formed.

The Agricultural Practices Review Committee consists of two members with experience in the type of farming operation to which the complaint relates and a person at large. The Committee will determine whether or not the operation is following generally accepted farming practices and will write a report on its findings. The Committee will also try to mediate the dispute. A report is written that may include recommendations on how to adjust the operation to prevent the nuisance.

The report will lay out the Agricultural Practices Review Committee's findings and can be used in court as evidence if any parties wish to pursue the legal route.

A nuisance complaint cannot proceed to court action unless the complaint about the nuisance had been made at least 90 working days prior.

The process is not intended to deny people access to the court system, but it is intended to resolve as many dispute situations outside the court system as possible. The goal is to resolve disputes more effectively, more quickly and at less cost to individuals and the entire system.

Alberta Agriculture, Food and Rural Development

The Minister of Alberta Agriculture, Food and Rural Development (AAFRD) is responsible for the legislation and associated regulations. AAFRD is responsible for updating the legislation, which includes the Act and Regulations, to ensure they meet the

needs of the livestock industry and the public. AAFRD will also take the lead role in providing extension services and technology transfer of applied research to the livestock industry.

Municipalities

Municipalities continue to be important partners in this process. While they will not issue development permits, they will be encouraged to provide input on specific applications and develop land-use plans. Municipalities will always be notified of NRCB applications that pertain to projects situated within or adjacent to their boundaries. Since municipalities are directly affected parties their views will always be considered.

In making decisions, the NRCB will deal with environmental standards and also with social and community issues, where municipal input is important. Municipalities will be encouraged to develop land-use plans that identify where CFOs would not be compatible with current or future land uses, as well as the reasons why.

Transitional Provisions

The new regulations and approval process came into effect January 1, 2002. If an applicant submitted an application to a municipality for a CFO development permit and a decision on the application has not been made by the municipality before January 1, 2002, the municipality must continue to consider the application and make a decision unless the applicant withdraws the application prior to a decision being made.

Terms and conditions outlined in municipal development permits existing prior to January 1, 2002 still apply and prevail for existing operations. The NRCB will investigate any risk to the environment and is responsible for ensuring that terms and conditions in municipal development permits are met now and in the future.

UNDERSTANDING THE REGULATIONS

Guiding livestock producers through the key areas of the Regulations.

The Standards apply to:

- The owner or operator of a confined feeding operation (CFO) for which an approval or registration is required under the Act.
- The owner or operator of a manure storage facility for which an authorization is required under the Act.
- The owner or operator of a seasonal feeding and bedding site.
- The owner or operator of a manure collection area, whether or not the manure collection area is associated with a CFO required to be approved or registered under the Act, or with a manure storage facility required to be authorized under the Act.
- A person who applies manure.

A person to whom these Standards apply must maintain the agricultural operation in accordance with the Standards (Standards and Administration Regulation, Section 2).

DEFINITIONS

Aquifer. An underground water-bearing formation capable of yielding water (as defined under the Water Act).

Catch basin. An excavation, diked or walled structure, or a combination of structures, that is designed to intercept and store runoff water (Standards and Administration Regulation, Section 1).

Common body of water. The bed and shore of an irrigation canal, drainage canal, reservoir, river, stream, creek, lake, marsh, slough or other exposed body of water (Standards and Administration Regulation, Section 1), but not including:

(a) A waterworks system (as defined by the Environmental Protection and Enhancement Act), is any system providing potable water to a municipality, municipal development, industrial development, privately owned development, private utility or watering point, and includes any or all of the following components:

- Water wells connected to water supply lines, surface water intakes or infiltration galleries that constitute the water supply.
- Water supply lines.
- On-stream and off-stream water storage facilities.
- Water pumphouses.
- Water treatment plants.
- Potable water transmission lines.
- Potable water storage facilities.
- Potable water pumping facilities.
- Water distribution systems.

(b) A reservoir, lake, marsh or slough that is completely surrounded by private land controlled by the owner or operator and has no

outflow going directly beyond the private land to a drainage canal, reservoir, river, permanent stream or creek, lake or potable water source that is being used for human or livestock consumption.

(c) An irrigation canal or a drainage canal that is completely surrounded by private land controlled by the owner or operator and has no outflow going beyond the private land.

(d) A roadside ditch.

(e) A wastewater system (as defined by the Environmental Protection and Enhancement Act) is a system for collecting, treating and disposing of wastewater and includes:

- Wastewater treatment plants.
- Sewers and pumping stations that transport untreated wastewater from a wastewater collection system to a wastewater treatment plant.
- Facilities that provide storage to treated wastewater.
- Wastewater sludge treatment and disposal facilities.
- Sewers that transport treated wastewater from a wastewater treatment plant to the place where it is disposed of.
- Treated wastewater outfall facilities, including the outfall structures to a watercourse or any appurtenances of disposal of treated wastewater to land or to wetlands.

(f) A storm drainage system (as defined by the Environmental Protection and Enhancement Act) is any system for collecting, storing, and disposing of storm drainage and includes:

- The sewers and pumping stations that make up the storm drainage collection system.

DEFINITIONS *continued*

- The storm drainage storage, management and treatment facilities that buffer the effects of the peak runoff or improve the quality of the storm water.
- The sewers and pumping stations that transport storm drainage to the location where it is treated or disposed of.
- The storm drainage outfall structures leading directly to a drainage canal, reservoir, river, permanent stream or creek, lake or potable water source that is being used for human or livestock consumption.

(g) A temporary stream on private land controlled by the owner or operator that has no outflow going beyond the private land directly to a drainage canal, reservoir, river, permanent stream or creek, lake or potable water source that is being used for human or livestock consumption.

Composted manure. A stable humus-like material that results from the biological decomposition and stabilization of organic materials under aerobic and thermophilic conditions that is potentially beneficial to plant growth and is sanitized to a degree that protects human life (Standards and Administration Regulation, Section 1). Composted manure is treated the same as manure for storage and application purposes.

Confined Feeding Operation (CFO). An activity on land that is fenced or enclosed within buildings where livestock are confined for the purpose of growing, sustaining, finishing or breeding by means other than grazing, but does not include seasonal feeding and bedding sites (Act, Section 1).

Manure. Livestock excreta, associated feed losses, bedding, litter, soil and wash water, but does not include manure to which the Fertilizers Act (Canada) applies (Act, Section 1).

Manure collection area. The floor of a barn, including under-floor pits, the floor of a feedlot pen or catch basin (Standards and Administration Regulation, Section 1).

Manure storage facility. Any storage facility for manure (Act, Section 1).

Runoff. Liquid that drains as surface flow out of an agricultural operation or part of an agricultural operation, including rainwater and meltwater (Standards and Administration Regulation, Section 1).

Run-on. Liquid that drains as surface flow onto an agricultural operation or part of an agricultural operation, including rainwater and meltwater (Standards and Administration Regulation, Section 1).

Seasonal feeding and bedding sites. An overwintering site where livestock are fed and sheltered (Act, Section 1).

Short-term solid manure storage. Defined as an accumulated total of not more than six months over a three-year period and does not apply to feedlots or livestock corrals (Standards and Administration Regulation, Section 5).

Water table. The top of the zone of water saturation where water pressure equals atmospheric pressure regardless of whether the water is usable (Standards and Administration Regulation, Section 1).

Water well. As defined under the Water Act, an opening in the ground, whether drilled or altered from its natural state, that is used for:

- The production of groundwater for any purpose.
- Obtaining data on groundwater.
- Recharging an underground formation from which groundwater can be recovered, and includes any related equipment, buildings, structures and appurtenances, but does not include a dugout.



Siting Requirements under the Act

Siting is an integral part of protecting the environment, surface and groundwater and minimizing nuisance.

Location of livestock production facilities is an important component of developing or expanding a livestock facility. This section outlines the requirements for siting operations and facilities within an operation.

SITING TO MINIMIZE NUISANCE

Determining the Minimum Distance Separation. The Minimum Distance Separation (MDS) is a setback or buffer established between a CFO facility and adjacent land uses to minimize odour nuisance. It is measured from the outside walls of neighbouring residences (not the property line), to the point closest to the applicant's:

- Livestock facility.
- Manure storage facility.
- Catch basins.
- Feeding pen or barn.
- Milking facility.
- Compost area.

The following areas are not considered to be part of the livestock facility for the purpose of determining the MDS: feed handling areas, feed storage areas, offices, water supply, land on which manure is spread and grazing areas (Standards and Administration Regulation, Schedule 1).

Odour production. A number of factors take into account the nuisance value of livestock species, including the technology of production systems and the number of animals. This is described as a Livestock Siting Unit (LSU). The use of new technology is encouraged to reduce MDS.

Livestock Siting Unit (LSU). Livestock Siting Unit (LSU) is a method for comparing the odour potential of livestock facilities based on livestock type, manure production and manure handling system and is the basis for the MDS. The LSU is determined by multiplying the total number of animals (not animal units) by the various factors.

Odour objective. Describes the sensitivity or assumed tolerance level of neighbouring land uses and is based on four categories of land zoning. The category, once determined, indicates the odour objective used in the calculation.

Dispersion factor. A dispersion factor allows for a variance (possible reduction) to the MDS, based on unique climatic and topographic influences at the site that can influence odour dispersion. They include:

- Topography: The effect of topographical features, such as hills and valleys, on air dispersion.
- Screening: The effect of natural or constructed screening, such as windbreaks, trees, fences or screens, that reduces wind effects at the manure storage facility.
- Microclimate: Meteorological data may show a significant alteration in odour intensity or frequency of occurrence in relation to neighbouring land use. Some of these factors include temperature, humidity and wind direction and intensity.

Expansion factor. This is only applicable to expanding operations that are increasing the size of the facility to store more manure or to accommodate more livestock. This factor may reduce the MDS requirement and can only be determined by the Board (Standards and Administration Regulation, Schedule 1).

MINIMUM DISTANCE SEPARATION RULES

(Standards and Administration Regulation, Section 3)

The MDS must be determined using Schedule 1 of the Standards and Administration Regulation. It only applies to surrounding existing neighbours in place on the date the application was received by the NRCB Approval Officer.

- The MDS will never be less than 150 metres.
- The MDS requirement may be waived with respect to neighbours who also own CFOs and who all agree in writing to waive the requirement.
- The MDS does not apply if the affected residence is owned or is under the control of the owner or operator of the proposed operation.
- A CFO that is under the control of a single owner or operator, with manure storage facilities or manure collection areas located on adjacent land parcels, is considered to be one operation for the purposes of determining the MDS.
- A manure composting site associated with a CFO is a manure storage facility for the purposes of determining the MDS of the operation.
- The owner or operator of a CFO who holds an approval or registration for the operation, must locate the operation and all facilities for the operation in accordance to the MDS determined on the date the application was received by the Board.

WHO IS CONSIDERED AN AFFECTED PARTY (Matters Regulation, Section 5)

An "affected party" must be notified when applying for an approval for a CFO. They include:

- A person or municipality that is entitled, under the Water Act, to divert water from the river, stream or canal within 10 miles downstream, as measured along the water course, if any part of the CFO is located or is to be located within 100 metres of the bank of a river, stream or canal.
- The municipality where the CFO is to be located.
- A municipality within and a person who resides on or owns land that is within the following distances from the boundary of a parcel of land on which the CFO is located or is to be located:
 - 0.5 mile of a CFO that contains or is to contain 500 or fewer animal units.
 - 1 mile of a CFO that contains or is to contain 501 or more animal units but fewer than 1001 animal units.
 - 1.5 miles of a CFO that contains or is to contain 1001 or more animal units but fewer than 5001 animal units.
 - 2 miles of a CFO that contains or is to contain 5001 or more animal units but fewer than 10,001 animal units.
 - 3 miles of a CFO that contains or is to contain 10,001 or more animal units but fewer than 20,001 animal units.
 - 4 miles of a CFO that contains or is to contain 20,001 or more animal units.
- A person who resides on land that is adjacent to the parcel of land on which manure from the CFO is spread or is to be spread.

SITING TO PROTECT THE ENVIRONMENT, SURFACE AND GROUNDWATER

It is important to plan for the location of the buildings, manure storage and catch basins to be constructed in relation to the location of new or existing wells, aquifers, water table and the flow of water on and off the property.

Seasonal feeding and bedding sites. These must be located 30 metres or more from a common body of water. This does not apply if the owner or operator constructs an interceptor between the site and the common body of water to divert runoff away from the common body of water, or removes manure and bedding that accumulates at the site to an appropriate manure storage facility before runoff occurs at the site (Standards and Administration Regulation, Section 4). Producers do not need to apply to the NRCB for an authorization for these sites, however they are expected to meet the requirements in the legislation by the end of 2004 as specified in the Regulations.

Short-term solid manure storage. These must not be located less than 150 metres from the nearest residence that is not owned or under the control of the owner or operator of the storage area. The site must be located at least one metre above the water table (Standards and Administration Regulation, Section 5). It must be located to observe the 1:25 year flood plain and the setback from springs, water wells and from a common body of water.

Manure collection area. Feedlot pens, barn floors and pits, corrals and catch basins are considered manure collection areas. They must be constructed to the same standards for ground and surface water protection as would a manure storage facility (Standards and Administration Regulation, Section 7, 8 and 9).

Surface water control systems. To prevent runoff from leaving a manure storage facility, run-on and runoff control systems must be constructed. These systems must not significantly alter regular water flow, must not affect or alter a non-flowing water body and must not be located on a fish-bearing water body (Standards and Administration Regulation, Section 6).

Natural water and wells. The owner or operator of a manure storage facility or a manure collection area must not construct the facility or area less than 100 metres from a spring or water well. This does not apply if the owner or operator:

- Demonstrates to the Board, prior to construction, that an aquifer from which the spring rises or into which the water well is drilled is not likely to be contaminated by the facility.
- Implements a groundwater monitoring program (Standards and Administration Regulation, Section 7).

The owner or operator of a manure storage facility or manure collection area must not construct the facility or area less than 30 metres from a common body of water (Standards and Administration Regulation, Section 4). This does not apply if the owner or operator demonstrates to the Board, prior to construction, that either:

- The natural drainage from the facility or area is away from the common body of water (Standards and Administration Regulation, Section 7).
- A berm or other secondary protection for the common body of water constructed by the owner or operator protects the common body of water from contamination (Standards and Administration Regulation, Section 7).

Flooded areas. The manure storage facility or manure collection area must include erosion control measures that can protect the facility from erosion, runoff, run-on and flooding.

- The 1:25 year maximum flood level at a manure storage facility or at a manure collection area must not be less than one metre below any part of the facility where run-on can come into contact with the stored manure.

- If the 1:25 year maximum flood level cannot be determined, the manure storage facility or manure collection area must be not less than one metre below any part of the facility where run-on from the highest known flood level can come into contact with the stored manure (Standards and Administration Regulation, Section 8).

Water table protection. The owner or operator of a manure storage facility or manure collection area must include a liner that lies below the bottom of the facility and above the uppermost aquifer of the site.

If the liner of a manure storage facility or a manure collection area is manufactured (either of natural or synthetic materials) the bottom of the liner must be not less than one metre above the water table of the site at the time of construction.

If the liner of a manure storage facility or a manure collection area is made of non-compacted, naturally occurring material, the top of the liner must be not less than one metre above the water table of the site at the time of construction.

The bottom of a liner of a liquid or solid manure storage facility,

catch basin of a solid manure storage, or a manure collection area made of non-compacted naturally occurring material or compacted naturally occurring material must not be less than one metre above the top of an aquifer (Standards and Administration Regulation, Section 9).

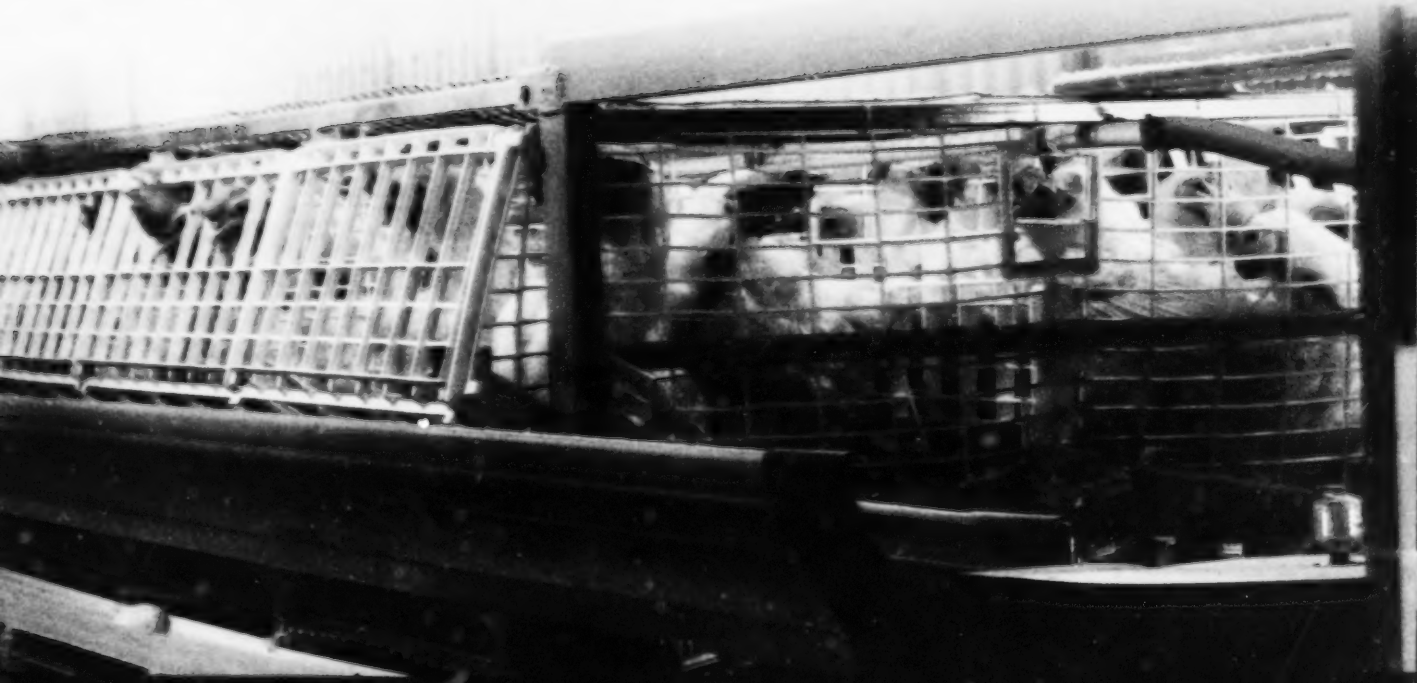
Liquid manure containment. The owner or operator of an open liquid manure storage facility must provide a system of secondary containment for the liquid manure, if there is any possibility that it can be discharged into a common body of water. To be determined in consultation with the NRCB.

Groundwater protection. As determined by the Board, the owner or operator of an earthen liquid manure storage facility must install and maintain a leakage detection system for the facility, consisting of at least one monitoring well up gradient of the facility and at least two monitoring wells down gradient of the facility to monitor for contaminants. These wells must be monitored at regular intervals (Standards and Administration Regulation, Section 18).

LATEST INFORMATION

Check the Web site for the latest information on AOPA.

Web site: www.agric.gov.ab.ca/navigation/livestock/cfo/index.html



Manure Storage

Storage standards apply to all livestock production, including confined feeding operations and anyone who handles and stores manure.

The Agricultural Operation Practices Act (AOPA) includes standards for the siting and construction of solid and liquid manure storage. This applies to persons who store solid manure on a feedlot or in a livestock corral.

Seasonal feeding and bedding sites. Must be located 30 metres or more from a common body of water. If the distance is less than 30 metres, the owner or operator must construct an interceptor between the site and the common body of water to divert runoff away from the common body of water. If an interceptor is not constructed, manure and bedding that accumulates at the site must be moved to an appropriate manure storage facility before runoff occurs at the site (Standards and Administration Regulation, Section 4).

Short-term solid manure storage. Short-term means an accumulated total of not more than six months over a three-year period. A short-term manure storage must be located 150 metres or more from the nearest residence that is not owned or under the control of the person responsible for the storage, and it must be one metre or more above the water table (Standards and Administration Regulation, Section 5). It must be located to observe the 1:25 year flood plain and the setback from springs, water wells and from a common body of water.

Manure collection area. Feedlot pens, barn floors and pits, corrals and catch basins are considered manure collection areas. They must be constructed to the same standards for ground and surface water protection as would a manure storage facility (Standards and Administration Regulation, Section 7, 8 and 9).

Surface water control systems. To prevent runoff from leaving a manure storage facility, run-on and runoff control systems must be constructed. These systems must not significantly alter regular water flow, must not affect or alter a non-flowing water body and must not be located on a fish-bearing water body. The system must be designed and certified by a Professional Engineer (Standards and Administration Regulation, Section 6).

Water table protection. The Standards and Administration Regulation outlines the standard for construction of liners for feedlot pens, lagoons and surface water control systems.

Liners. A liner is required for all manure storage with the exception of a short-term manure storage (Standards and Administration Regulation, Section 9).

- The top of the liner must be one metre or more above the water table of the site at the time of construction.
- The bottom of the liner must be one metre or more above the top of an aquifer.
- Liquid manure storage liners must be equivalent to 10 metres of material with a hydraulic conductivity of 1×10^{-6} centimetres per second or less.
- Catch basin liners must be equivalent to five metres of material with a hydraulic conductivity of 1×10^{-6} centimetres per second or less.
- Solid manure storage liners must be equivalent to two metres of material with a hydraulic conductivity of 1×10^{-6} centimetres per second or less.

- Liner must not be less than one metre thick when measured perpendicular to the liner's surface.
- The bottom of the liner must be one metre or more above the top of an aquifer and water table at the time of construction.
- The liner must provide the same or greater protection as liners described above.

- Bottom of liner must be one metre or more above the water table at the time of construction.
- Must provide the same or greater protection as liners described above (Standards and Administration Regulation, Section 9).

Manure storage volumes. The storage must be sized to accommodate nine consecutive months or more of manure production (Standards and Administration Regulation, Section 10).

Liquid manure containment. A freeboard of 0.5 metres or more is required on an open liquid manure storage facility. Secondary containment must be provided if there is a reasonable possibility the manure may discharge into a common body of water (Standards and Administration Regulation, Section 11).

Safety. The liquid manure storage facility must be secure from unauthorized access. Warning signs must be placed at the entrance to the storage facility (Standards and Administration Regulation, Section 12).

Access. Year-round access to the liquid manure storage facility must be provided (Standards and Administration Regulation, Section 13).

Dust and fly control. The owner or operator of a CFO or a manure storage facility must employ reasonable measures to control the level of infestation of flies at a location occupied by the operation, facility or site. The NRCB may require an owner or operator to use a specific dust or fly control program at a location occupied by the operation, facility or site (Standards and Administration Regulation, Section 20).

Side slopes of earthen liquid manure storage (horizontal to vertical). These are clearly defined as:

- Inside slopes 3:1 or more.
- Outside slopes 4:1 or more.
- Freeboard and the outside slopes must have topsoil and a vegetative covering to prevent erosion.
- Shrubs, trees, and deep-rooted plants near the sides of the facility must be removed (Standards and Administration Regulation, Section 14).

Erosion protection. Inside and outside walls must be protected from scouring and erosion, as well as wave and flood action. The filling, discharging, and agitating areas must also be protected against scouring and erosion (Standards and Administration Regulation, Section 15).

Filling and sealing. The influent pipe for filling the primary cell of the liquid manure storage must be located within the bottom quarter of the structure (Standards and Administration Regulation, Section 16). Piping and other intrusions to the liner must be sealed (Standards and Administration Regulation, Section 17).

Groundwater monitoring. If required by the NRCB, monitoring wells must be installed, with at least one up gradient and two down gradient of the storage facility. If required by the NRCB, the monitoring wells must be monitored at regular intervals (Standards and Administration Regulation, Section 18).

Catch basin. Must accommodate at least a one-day rainfall that has a one in 30 year probability, and must have at least a 0.5 metre freeboard. Must have a marker clearly visible to indicate when the basin is full (Standards and Administration Regulation, Section 19).

Unused and abandoned sites. The owner or operator of land or buildings that are a CFO, a manure storage facility or a seasonal feeding and bedding site that are not being used as such, must remove the manure from the land or buildings within one year, or a period set by the NRCB (Standards and Administration Regulation, Section 21).



Nutrient Management

The Act establishes a basis for manure to be managed as a nutrient.

All livestock producers and other users of manure must meet the standards provided in the legislation for the application of livestock manure. The rules also apply for composted manure but do not apply to manure to which the Fertilizers Act (Canada) applies.

Manure can only be applied to arable land and should be incorporated within 48 hours, except for forage, direct-seeded crops, and frozen and snow-covered soils.

The owner or operator of an agricultural operation must manage manure, taking into account soil type, soil nitrate-nitrogen level, soil salinity level and setbacks.

The owner or operator of an agricultural operation will have until the end of 2004 to comply with the new nutrient requirements in the legislation.

LAND BASE REQUIREMENT

Land base requirement is the total acreage owned, operated and/or accessed, sufficient to accommodate the use of total manure produced, in an agronomic and environmentally sustainable manner. Land base requirement can be determined in two ways:

Land base guidelines. Tables 8 to 19 published in Schedule 3 of the Standards and Administration Regulation are based on a one-time application of nitrogen and not the amount that can be applied year after year to the same land. Calculations are based on livestock type, livestock size and soil type. For multi-year application of manure the residual amount of nitrogen in the soil should be taken into account.

Nutrient management plan. The NRCB may authorize a person to apply manure to land in accordance with a nutrient management plan (NMP) proposed by the person if the Board is satisfied that following the NMP will provide the equivalent or greater protection to the water and the soil (Standards and Administration Regulation, Section 26).

MINIMUM SETBACK DISTANCES FOR APPLICATION LIMITS

Minimum setback distances for manure application.

These distances are required to ensure manure or runoff does not enter a common body of water or leave the land on which the manure is applied or create a risk to the environment. A person must not apply manure:

- Within 10 metres of a common body of water if using subsurface injection.
- Within 30 metres of a common body of water if surface applying manure and incorporating it within 48 hours.

- Within 30 metres of a water well (Standards and Administration Regulation, Section 24).

A person who applies manure on forage, direct-seeded crops, and frozen and snow-covered soils must meet the minimum setback distances for application of manure, keeping in mind the slope of the terrain (Standards and Administration Regulation, Schedule 3, Tables 1 & 2). If there is likelihood that contamination may occur, producers should extend the setback.

Minimum Setback Distances

MEAN SLOPE	REQUIRED SETBACK DISTANCE FROM COMMON BODY OF WATER
Less than 4%	30 m
4% but less than 6%	60 m
6% but less than 12%	90 m
More than 12%	No application allowed

MANURE APPLICATION RATE

A person must not apply manure to soil if:

- The soil salinity is more than 4 deciSiemens per metre (dS/m), as measured by the electrical conductivity of a saturated paste extract based on a representative soil analysis of the top 15 centimetres (Standards and Administration Regulation, Section 25).
- It will increase the soil salinity after the manure is applied by more than one deciSiemen per metre (dS/m), as measured by the electrical conductivity of a saturated paste extract based on a representative soil analysis of the top 15 centimetres (Standards and Administration Regulation, Section 25).
- It will increase soil nitrate-nitrogen levels in 0-60 cm depth to a level that equals or exceeds the specified limits as indicated in Nitrate-Nitrogen Limits in Soil table (page 15).

SOIL TESTING AND ANALYSIS

No soil testing is required for agricultural operations that apply less than 300 tonnes of manure annually. For agricultural operations that apply amounts over 300 tonnes of manure annually, a person must not apply manure to soil until the soil is tested according to the latest edition of the Manual on Soil Sampling and Methods of Analysis, published by The Canadian Society of Soil Science. Soil testing analysis requirements are outlined in Standards and Administration Regulation, Schedule 3.

Nitrate-Nitrogen Limits in Soil (Standards and Administration Regulation, Schedule 3, Table 3)

SOIL	SANDY (> 45% SAND AND WATER TABLE < 4 m)	SANDY (> 45% SAND AND WATER TABLE > 4 m)	MEDIUM AND FINE TEXTURED SOILS
Brown	80 kg/ha (75 lb./ac.)	110 kg/ha (100 lb./ac.)	140 kg/ha (125 lb./ac.)
Dark Brown	110 kg/ha (100 lb./ac.)	140 kg/ha (125 lb./ac.)	170 kg/ha (150 lb./ac.)
Black	140 kg/ha (125 lb./ac.)	170 kg/ha (150 lb./ac.)	225 kg/ha (200 lb./ac.)
Luviosolic (Grey wooded)	110 kg/ha (100 lb./ac.)	140 kg/ha (125 lb./ac.)	170 kg/ha (150 lb./ac.)
Irrigated	180 kg/ha (160 lb./ac.)	225 kg/ha (200 lb./ac.)	270 kg/ha (240 lb./ac.)

Soil test information must be no older than three years for developing a new nutrient management plan, except for soil texture, which is a one-time analysis (Standards and Administration Regulation, Schedule 3).

Existing operations have until the end of 2004 to comply with the soil testing and salinity and nitrogen loading limits contained in the regulations. Operators are encouraged to follow the new regulations as soon as possible.

LIQUID MANURE AND CATCH BASIN CONTENTS

The application rates for liquid manure and catch basin contents are the same as for solid manure. A person who applies liquid manure or catch basin contents must ensure that the manure or catch basin contents do not create a risk to the environment by leaving the land to which they are applied, by entering a common body of water or by becoming return flow.

Liquid manure or catch basin contents cannot be applied on a crop that is grown for human consumption and is commonly eaten raw (Standards and Administration Regulation, Section 27).

RECORD KEEPING

The Act requires that manure management records be kept by the following individuals for a minimum of five years:

A CFO must record;

- The name and address of a person to whom control of 300 tonnes or more of manure per year is transferred, the date of the transfer and the volume or weight transferred.
- The volume or weight of manure production.

A person who transfers control of manure to another person must record;

- The name and address of a person to whom 300 tonnes or more of manure per year is transferred.
- The date of the transfer.
- The volume or weight of manure transferred.

A person who receives or removes 300 tonnes or more of manure per year must record;

- The volume or weight of manure received or removed.
- The name and address of the person from whom manure is received or removed.
- The date of the receipt or removal.

A person who applies 300 tonnes or more of manure per year to land under the person's control must record;

- The name and address of a person from whom manure is received, the date it was received and the volume or weight received.
- The legal description of the land to which manure is applied.
- The area of the land to which manure is applied.
- The date the manure is applied.
- The volume or weight of manure applied.
- The application rates of manure nutrients and fertilizer by field and year.
- The dates of application and incorporation and the methods used for each field.
- The soil test results by field for the nutrients specified in Schedule 3 (Standards and Administration Regulation, Table 3).

An owner or operator is required to keep manure records for five years (Standards and Administration Regulation, Section 28).

MORE INFORMATION

**For the latest information on the Agricultural Operation Practices Act (AOPA)
check the Web site or contact:**

Alberta Agriculture, Food and Rural Development

3rd Floor, 4920 - 51st Street

Red Deer, AB T4N 6K8

Phone (403) 340-5359 (dial 310-0000 for a toll-free connection)

Fax (403) 340-4896

Email: cfoinfo@gov.ab.ca

Web site: www.agric.gov.ab.ca/navigation/livestock/cfo/index.html

Natural Resources Conservation Board

For application forms and more detailed information on the new requirements, contact the nearest NRCB regional office (dial 310-0000 for a toll-free connection):

Lethbridge

Phone (403) 381-5166

Fax (403) 381-5806

Red Deer

Phone (403) 340-5241

Fax (403) 340-4896

Barrhead

Phone (780) 674-8303

Fax (780) 674-8309

Fairview

Phone (780) 835-7111

Fax (780) 835-3600

Toll-free Response Line (866) 383-6722

NRCB Web site: www.nrcb.gov.ab.ca

Farmers' Advocate of Alberta

For information on nuisance complaints on all agricultural operations, contact the Farmers' Advocate office (dial 310-0000 for a toll-free connection):

Edmonton

Phone (780) 427-2433

Fax (780) 427-3913

Farmers' Advocate Web site:

www.agric.gov.ab.ca/navigation/agencies/farmersadvocate

DISCLAIMER: This guide summarizes important aspects of the Agricultural Operation Practices Act and the Natural Resources Conservation Board process. The document is not intended as legal advice, but as an interpretive document to the Agricultural Operation Practices Act and Regulations. The responsibility is on the producer/operator to ensure due diligence has been followed. The Agricultural Operation Practices Act and Natural Resources Conservation Board Act, and Regulations under these Acts should be referred to for legal definitions and for the specific requirements at each stage of the process.

This document has been reviewed by the Office of the Farmers' Advocate of Alberta, the Natural Resources Conservation Board and Alberta Agriculture, Food and Rural Development.

Alberta
Agriculture, Food and Rural Development